

REMARKS

In the Office Action mailed June 7, 2006, the Examiner objected to claims 22 and 25 for informalities. The Examiner rejected claims 19 and 23 under 35 USC §102(b) as being anticipated by Baker (US 5,199,261). The Examiner rejected claim 25 under 35 USC §103(a) as being unpatentable over Baker (US 5,199,261) in view of Dinger (US 4,453,381). The Examiner allowed claims 1-3, 6-8, 10-18, and 20-22.

Reconsideration and re-examination of the application as amended considering the following remarks is respectfully requested.

Objection to claims 22 and 25

The Examiner objected to claims 22 and 25 for informalities. Applicants' have amended claim 22 to reflect operation of the invention as shown in the Figures and described in the specification. Applicants respectfully traverse the requirement for amendment of claim 25. Claim 25 depends from claim 23, which includes at least two turbochargers, with operation in parallel connecting the turbocharger inlets (at least two) to ambient and outlets (at least two) to the intake manifold as shown in Figure 3. As such, Applicants believe the plural form is correct and consistent with the specification and drawings.

Rejection Under 35 USC §102(b)

The Examiner rejected claims 19 and 23 as being anticipated by Baker (US 5,199,261). Applicants respectfully disagree and traverse the Examiner's rejection.

Baker '261 discloses a system that includes a smaller turbocharger used for low volume exhaust and a larger turbocharger used for higher volume exhaust flow. The flow control devices are used to "effectively bypass[] the smaller exhaust gas turbocharger during operating conditions which produce high exhaust gas volumes. This is similar to the twin VGT's or twostage turbocharger systems described in the Background section Paragraphs 5-6 of Applicants' disclosure. These systems are not switchable between parallel and series operation as described and claimed by Applicants. Rather, the smaller turbocharger is used for low volume exhaust conditions and bypassed for higher-flows to prevent exceeding its capacity as described by Baker '261 in the Abstract and also Col. 3, ll. 18-22. While Baker discloses a transition period where exhaust gas is provided to both turbochargers, this is different from the parallel operation disclosed and claimed by Applicants (see Fig. 3 and associated text) where both turbocharger inlets are coupled to the exhaust manifold and both outlets are coupled to ambient (through after-treatment devices). As described in Paragraph 10 of Applicants disclosure, the present invention provides a two stage series configuration to generate more boost for improved vehicle launch compared to a sequential parallel configuration (as disclosed by Baker '261) that only uses one stage at low engine speeds. In addition, Applicants' claimed invention provides a parallel configuration to provide sufficient air handling capacity at higher engine speeds using

smaller turbochargers (compared to the larger turbocharger of Baker '261 that must be sized to handle the entire exhaust flow when the smaller is bypassed) with lower intertia to improve turbocharger efficiency and transient response across the entire operating range.

As shown in Figs. 1-3 of Baker '261, turbine 16 is always connected to turbine 22, i.e. the turbocharger turbines are always connected in series, with airflow control device 14 used to bypass the smaller turbine under higher exhaust flows. Similarly, the outlet of compressor 34 is always coupled to the inlet of compressor 30 with device 28 used to effectively bypass compressor 30 under some operating conditions. As such, with respect to claim 19, Baker does not disclose (or suggest) first and second turbochargers having a plurality of flow control devices to operate in one of a parallel configuration and a series configuration as claimed. Similarly, with respect to claim 23, Baker '261 does not disclose microprocessor controlled flow control devices and does not disclose or suggest actuating the flow control devices to operate the turbochargers in a series configuration to couple an outlet of a second compressor to an inlet of a first compressor and to couple an outlet of a first turbine to an inlet of a second turbine. As described above, the turbochargers disclosed by Baker '261 are permanently connected in a series configuration with the outlet of the first turbine connected to the inlet of the second turbine and the outlet of one compressor connected to the inlet of another. The flow control devices of Baker '261 cannot be actuated to operate the system in series and parallel configurations as disclosed and claimed by Applicants.

For the reasons above, Applicants respectfully submit that Baker '261 does not anticipate the invention claimed in claims 19 and 23 and respectfully request the Examiner to reconsider and withdraw the rejection.

Rejection Under 35 USC § 103(a)

The Examiner rejected claim 25 as being unpatentable over Baker '261 in view of Dinger (US 4,453,381). Applicants respectfully disagree and traverse the Examiner's rejection.

As explained above with respect to claim 23 and incorporated here by reference, Baker '261 does not disclose instructions for actuating flow control devices to switch the turbocharger turbines/compressors inlets/outlets to operate in parallel or series mode as claimed such that the rejection under 35 USC §103(a) should be withdrawn for this reason alone. In addition, Dinger '381 is directed to a system that uses a single turbocharger in combination with an auxiliary flywheel-driven compressor and does not even disclose the use of two turbochargers. As such, the "compressor" disclosed by Dinger is not part of a turbocharger and the proposed combination of Baker '261 and Dinger '381 taken as a whole, even if proper, fails to teach or suggest instructions for controlling flow control devices to connect the inlets of two turbocharger compressors as disclosed and claimed by Applicants.

Summary

Applicants have made a genuine effort to respond to the Examiner's objections and rejections to advance prosecution of this application. Applicants respectfully submit that all formal and substantive requirements for patentability have been met and that this case is in condition for allowance, which action is respectfully requested. The Examiner is invited to telephone the undersigned to resolve any remaining issues that may be necessary to place this case in condition for allowance.

No additional fee is believed to be due as a result of filing this paper. However, please charge any fee or apply any credit to <u>Deposit Account 06-1510 (Ford Global Technologies, LLC)</u>. If there are insufficient funds in this account, please charge the fees to Deposit Account No.06-1505.

Respectfully submitted:

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